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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,193	06/27/2003	Lev Ryzhikov	1857.0910001	5795

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STERNE, KESSLER, GOLDSTEIN & FOX P.L.L.C.
1100 NEW YORK AVENUE, N.W.
WASHINGTON, DC 20005

EXAMINER

PRITCHETT, JOSHUA L

ART UNIT	PAPER NUMBER
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2872

MAIL DATE	DELIVERY MODE
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05/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/607,193	Applicant(s) RYZHIKOV ET AL.	
	Examiner Joshua L. Pritchett	Art Unit 2872	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
 - If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
 - Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 January 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 18-26 and 28-31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 18-26 and 28-30 is/are allowed.
- 6) ☒ Claim(s) 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 31 is rejected under 35 U.S.C. 103(a) as being unpatentable over Shibayama (US 6,304,389) in view of Schultz (WO 98/28644).

Shibayama teaches a first lens group (G1) comprising three lenses (the doublet U11 is two lenses) a second lens group comprising two or three lenses (G2) a third lens group consisting of a single lens (G3) made from one material having one index of refraction and having a spherical receiving surface and an a spherical transmitting surface (col. 6 lines 5-7) and an aperture stop (S) between the first and second lens groups (Fig. 1). Shibayama lacks reference to the use of a fold mirror. Shultz teaches the use of a fold mirror between the second and third lens groups. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have the Shibayama invention include the fold mirror of Shultz for the purpose of decreasing the overall physical length of the lens system to make the system more compact for easier transportation of the system.

Response to Arguments

Applicant's arguments, see Appeal Brief, filed January 22, 2007, with respect to the rejection(s) of claim(s) 31 under Schultz have been fully considered and are persuasive.

Art Unit: 2872

Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shibayama.

Applicant's arguments, see Appeal Brief, filed January 22, 2007, with respect to claim 18 have been fully considered and are persuasive. The rejection of claim 18 has been withdrawn. Applicant argued it was not within the skill of one of ordinary skill in the art to reclassify the lenses taught by the prior art into different lens group while maintaining the claimed functionality that defines each lens group.

Allowable Subject Matter

Claims 18-26 and 28-30 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 18, the prior art fails to teach or suggest a projection optical system wherein the first lens group comprising three lenses the decrease the numerical aperture of the beam, the second lens group comprising two or three lenses that controls characteristics of the beam at a pupil plane and the third lens group consisting of a single lens made from one material having one refractive index and having a spherical receiving surface and an aspherical transmitting surface and controls field characteristics of the beam at a patterning device plane an aperture stop between the first and second lens groups and a fold mirror between the second and third lens groups.

The remaining claims depend from claim 18 and are allowable for the same reasons

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Joshua L. Pritchett whose telephone number is 571-272-2318.


The examiner can normally be reached on Monday - Friday 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Stephone Allen can be reached on 571-272-2434. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Application/Control Number: 10/607,193
Art Unit: 2872

Page 5

A handwritten signature in black ink, appearing to read "Joshua L Pritchett", with a long horizontal flourish extending to the right.

Joshua L Pritchett
Examiner
Art Unit 2872